MICROCOPY RESOLUTION TEST CHART

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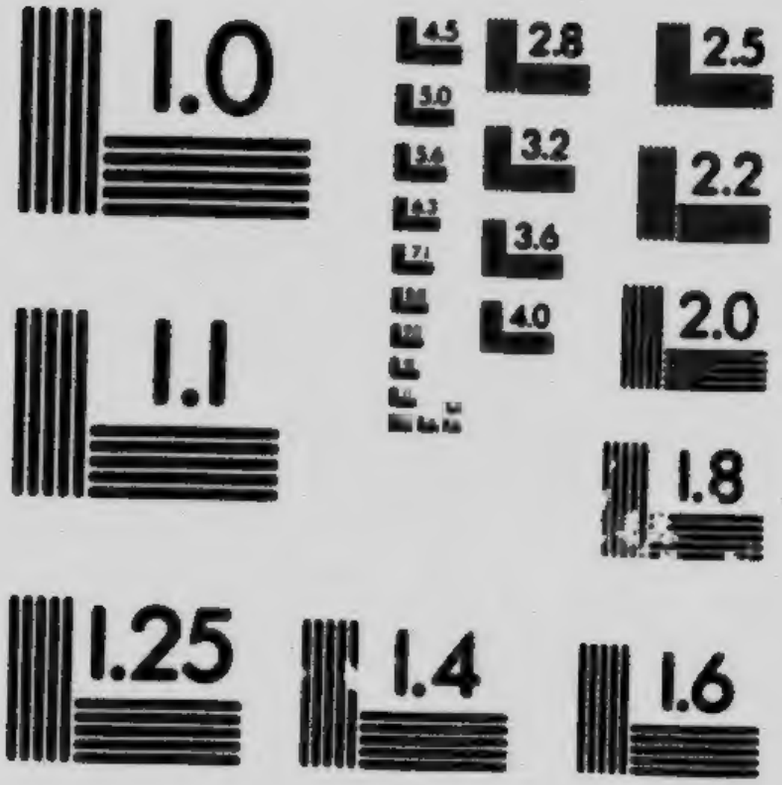

DEPARTMENT OF AGRICULTURE

CENTRAL EXPERIMENTAL FARM
OTTAWA, CANADA

RESULTS OBTAINED IN 1907

ON THE

DOMINION EXPERIMENTAL FARMS

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES

BY

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MINISTER OF AGRICULTURE

To the Honourable

The Minister of Agriculture.

SIR,—I beg to submit herewith, for your approval Bulletin No. 58 of the Experimental Farm series, which has been prepared by the Cerealist, Dr. C. E. Saunders and myself. There are presented in this publication the results of a large number of experiments, which have been conducted at all the experimental farms in your Department during the season of 1907, with spring wheat, durum or macaroni wheat, emmer and spelt, oats, barley, peas, Indian corn, turnips, mangels, carrots, sugar beets and potatoes. The average results are also given of the tests for the past five years of those varieties which have been long under trial.

These test plots are conducted with the object of gaining information as to the relative productiveness of the different sorts and their earliness in ripening. The returns show much variation in the weight of the crops grown and point to the importance of care in the choice of varieties of seed for sowing. It is hoped that these results giving the experience gained under some of the more important climatic variations found in the country, will prove useful to farmers in every part of ada.

I have the honour to be sir,

Your obedient servant.

WM. SAUNDERS,

Director of Experimental Farms.

OTTAWA, December 4th, 1907.

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ON THE

DOMINION EXPERIMENTAL FARMS

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES

By William Saunders, C.M.G., LL.D., F.R.S.C., F.L.S., &c.
Director of Experimental Farms

and Chas. E. Saunders, B.A., Ph.D., *Cerealist.*

During the past thirteen years experiments have been conducted on uniform trial plots at each of the older Dominion Experimental Farms for the purpose of gaining information as to the most productive and earliest ripening varieties of grain, fodder corn, field roots and potatoes. In arranging for these plots, the seed has always been supplied at the outset from a common stock. In each case the seed has been sown as early as practicable and, as a rule, all the different varieties of the same crop have been sown on the same day or at most within two or three days, so as to give to all an even start. The land chosen for these plots has been as nearly uniform in character as could be found and before sowing has been brought into a good condition of tilth. In this bulletin, which is the thirteenth of the series, the results of the experiments are presented in a somewhat different form from that of the earlier issues. The establishment of additional experimental farms necessarily disturbs the uniformity of the series of tests, viewed as a whole, and makes it seem desirable to bring together under one heading all the facts relative to each farm rather than to classify the returns under the names of the various crops tested. In this way the peculiarities of the climate and soil of each district will be more clearly displayed and the information presented in a form perhaps more convenient and acceptable to most farmers, who with the increase in the number of experimental farms will in most instances be able to look to one particular farm as fairly representing their own conditions and will naturally feel greater interest in this than in the results obtained in other parts of the Dominion.

The varieties are, as far as possible, arranged in the tables in the order of their average yield for the last five years. Those sorts which have not been grown for five years are arranged in the order of their average yield for the time during which they have been tested. While a five-year period is undoubtedly rather short for reaching any final conclusions, it seems undesirable to lengthen it, since by so doing all recently introduced varieties would be kept too long from taking their place in the tables with the older sorts.

The lists of varieties given do not include all the sorts which are being tested on the experimental farms. Some of the new or less important varieties are omitted here but will be referred to in the annual report of the farms.

In computing the averages for these tables the same five years have been used in each case, except in a few instances where the omission or failure of one of the plots made a blank in the records for that year. These instances are marked with a cross† and the true position in the tables of the varieties so marked is to be regarded as somewhat uncertain.

Cross-bred varieties produced on the experimental farms are marked with an asterisk.*

The yields of most of the crops are expressed in the tables in bushels per acre or tons per acre. The legal bushels in Canada are as follows: wheat 60 lbs., oats 34 lbs., barley 48 lbs., peas 60 lbs., potatoes 60 lbs. The ton contains 2,000 lbs. The yields of emmer and spelt are expressed in pounds per acre.

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONTARIO.

Most of the cereals grown on this farm have given very fair yields during 1907; but some of the early sown sorts have given less than an average crop owing to the unusually wet and late spring. Seeding began about a week later than usual, but was interrupted by unfavourable weather which much delayed the completion of the work. The yield of peas has been above the average. Field roots and Indian corn have given fair returns but potatoes have not done nearly so well as usual.

The plots of grain have been reduced in size at this farm from one fortieth of an acre to one sixtieth. More careful handling is possible with the crop from the smaller plot and it is believed that this reduction in size will cause an increase rather than a decrease in the accuracy of the returns.

The yield per acre of the field roots is calculated from that obtained from one hundredth of an acre, the yield of Indian corn from two rows each 66 feet long, and the yield of potatoes from one row 66 feet long.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) grown at the Central Experimental Farm during 1907 are here reported on. The wheat was sown April 29th, the seed being used at the rate of about one and one half bushels per acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Bishop	31	20	99	38	..	10	Stanley*	26	8	102	25	..
2	Herisson Bearded	30	30	105	42	..	11	White Fife	24	42	108	25	30
3	Pringle's Champlain	30	12	103	38	..	12	Percy*	24	6	102	20	30
4	Colorado	29	56	102	37	..							
5	Preston*	29	14	102	26	30		(For less than 5 years)					
6	Huron*	28	12	105	33	..							
7	White Russian	27	44	109	33	..		Riga* (4 years)	27	25	95	29	..
8	Red Fife	26	38	108	29	30		Hungarian White (3 years)	35	23	103	35	30
9	Red Fern	26	34	105	30	30							

The average crop in 1907 of the fourteen varieties of spring wheat on the Central Experimental Farm was 31 bushels 39 lbs. per acre.

Central Experimental Farm, Ottawa, Ontario.

DURUM OR MACARONI WHEAT.

The results of the test of varieties of durum wheat are published in a separate table, as these wheats possess qualities rather different from those of the ordinary sorts of spring wheat. While it is possible to make good flour from some kinds of durum wheat, such flour is generally unpopular. Furthermore the peculiar character of the kernels necessitates the use of somewhat different methods in the milling of these wheats. They are therefore often looked upon with disfavour by millers.

Farmers who grow any of the varieties should exercise great care to prevent them from becoming mixed with the standard sorts used for flour making

Four of the varieties of durum wheat grown at Ottawa in 19[illegible] are here reported upon. The seed was sown on May 3rd at the rate of about one and three-quarter bushels to the acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Roumanian	39	36	108	50	..	3	Goose	32	54	105	50	30
2	Yellow Gharnovka ...	33	14	109	32	30	4	Mahmoudi	24	46	108	35	30

The average crop in 1907 of the four varieties of durum wheat on the Central Experimental Farm was 42 bushels 8 lbs. per acre.

EMMER AND SPELT.

Two varieties of emmer and two of spelt are here reported upon. The seed was sown on May 10 at the rate of about 120 lbs. to the acre. (This is equal to about four measured bushels.)

Common Emmer is the grain sometimes referred to under the incorrect name of "Spelts".

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Lbs.	Days.	Lbs.		(For five years.)	Lbs.	Days.	Lbs.
1	Red Emmer.....	2,202	111	1,950	3	Common Emmer.	2,128	104	2,520
2	Red Spelt.....	2,162	113	2,190	4	White Spelt.....	2,050	110	2,430

The average crop in 1907 of the four varieties of emmer and spelt on the Central Experimental Farm was 2,272 lbs. per acre.

Central Experimental Farm, Ottawa, Ontario.

OATS.

Thirty-one of the varieties of oats tested at Ottawa are here mentioned.

The seed was sown on May 2nd and 3rd at the rate of about two bushels per acre, except when the oats were unusually large, in which cases about half a bushel more of seed was used.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Twentieth Century...	78	10	100	85	20	18	Danish Island.....	66	22	103	78	18
2	Lincoln...	74	14	102	69	24	19	Pioneer	66	22	101	76	26
3	Banner	74	4	102	86	16	20	Golden Fleece†.....	66	15	104	75	30
4	White Giant.....	73	12	102	73	8	21	Golden Giant.....	65	32	107	71	16
5	Wide Awake	71	24	102	71	16	22	Sensation.....	65	28	101	76	26
6	Golden Beauty.....	71	16	102	73	8	23	Bavarian†.....	65	6	104	69	24
7	Irish Victor.....	71	8	104	87	12	24	Black Beauty.....	65	..	102	75	..
8	American Triumph...	70	28	102	82	32	25	Goldfinder.....	64	2	104	76	26
9	Abundance.....	70	14	102	85	20	26	Tartar King.....	63	32	99	83	28
10	Swedish Select†	70	10	101	85	20	27	Improved Ligowo .. .	63	4	102	73	8
11	Thousand Dollar.	69	30	100	79	14	28	Siberian.....	61	32	103	83	28
12	Milford White*	69	20	101	78	18	29	Columbus†	61	18	101	43	8
13	Improved American..	69	..	103	96	6	30	Joanette.....	59	6	106	65	10
14	Virginia White ..	67	12	102	57	12							
15	Kendal Black*.	67	6	104	79	14		(For less than 5 years,)					
16	Kendal White*.....	66	30	103	73	8							
17	American Beauty.....	66	28	100	75	30		Storm King (4 yrs.)...	44	19	98	68	28

The average crop in 1907 of the thirty-one varieties of oats on the Central Experimental Farm was 76 bushels, 5 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley grown at Ottawa in 1907 are here mentioned.

The plots of six-rowed barley were sown on April 26th the seed being used at the rate of about one and three quarter bushels per acre.

The plots of two-rowed barley were sown on April 27th the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years,)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Nugent*	55	14	95	46	42	9	Empire*	47	18	94	45	30
2	Albert*	53	18	94	35	30	10	Oderbruch.....	46	28	95	42	24
3	Stella*.....	52	26	93	50	30	11	Claude*	45	28	96	35	..
4	Odessa.....	51	38	93	54	18	12	Argyle*.....	44	18	94	25	30
5	Blue Long Head.....	50	34	94	48	6	13	Yale*	42	38	95	15	30
6	Mensury	50	32	93	33	36	14	Mansfield*.....	38	2	97	33	6
7	Summit*	50	32	92	40	..	15	Champion (beardless).	34	4	92	35	..
8	Trooper*.....	49	42	91	31	42							

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Central Experimental Farm was 38 bushels, 12 pounds per acre.

Central Experimental Farm, Ottawa, Ontario.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Standwell	47	42	99	40	30	10	Sidney *	38	18	98	26	42
2	Canadian Thorpe	47	26	99	48	6	11	Logan *	36	24	99	32	24
3	Invincible	47	26	100	46	42	12	Dunham *	36	18	99	34	18
4	French Chevalier	46	40	98	27	24		(For less than 5 years.)					
5	Jarvis *	45	10	96	40	30							
6	Clifford *	44	44	97	47	24							
7	Danish Chevalier	44	38	98	38	6		Swedish Chevalier (4 years)	52	12	96	54	18
8	Beaver *	43	22	95	38	6							
9	Gordon *	40	46	97	25	30							

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Central Experimental Farm was 38 bushels 27 lbs. per acre.

PEAS.

Twenty of the varieties of peas grown at Ottawa are here mentioned. The plots were sown on May 8th. The quantity of seed used per acre varied from two to three bushels, depending on the size of the pea.

Number.	Varieties tested.	Average yield.		Average days maturing	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Picton *	36	12	106	43	..	11	Early Britain	33	22	108	46	30
2	Prussian Blue	36	..	104	47	..	12	Daniel O'Rourke	32	56	105	42	..
3	Victoria *	35	42	110	40	30	13	Agnes *	32	46	106	37	30
4	Golden Vine	35	24	107	34	..	14	Wisconsin Blue	32	46	106	46	30
5	Chancellor	34	58	103	41	30	15	Archer *	32	16	109	38	..
6	Gregory *	34	48	110	40	..	16	Prince Albert	31	50	108	41	30
7	English Grey	34	44	108	43	..	17	Arthur *	31	12	102	43	..
8	Prince *	34	4	108	42	..	18	White Marrowfat	30	52	106	43	..
9	Mackay *	33	42	107	44	..	19	Nelson *	30	26	102	50	30
10	Paragon *†	33	42	104	50	30	20	Black-eye Marrowfat	30	18	107	39	30

The average crop in 1907 of the twenty varieties of peas on the Central Experimental Farm was 42 bushels, 40 lbs. per acre.

INDIAN CORN.

Twenty varieties of Indian corn were tested at Ottawa during 1907. They were sown in rows about three feet apart and the plants thinned out to six or eight inches apart in the rows.

Central Experimental Farm, Ottawa, Ontario.

The seed was sown on June 1st and the crop was cut green for ensilage on September 28th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Eureka	23	552	27	120	13	Clouds Early Yellow	18	608	16	1,000
2	Early Mastodon	22	847	21	900	14	Champion White Pearl	18	25	16	1,110
3	Giant Prolific Ensilage	22	671	23	640	15	White Cap Yellow Dent	17	848	15	360
4	Superior Fodder	22	88	22	1,430	16	King Philip	17	628	16	670
5	Red Cob Ensilage	21	900	21	1,230	17	North Dakota White	16	1,814	14	1,370
6	Early Butler	19	1,798	17	430	18	Angel of Midnight	15	1,218	15	580
7	Salzer's All Gold	19	1,490	21	350		(For less than 5 years.)				
8	Mammoth Cuban	18	1,994	15	1,020						
9	Selected Leaming	18	1,972	19	390		Wood's Northern Dent (2 yrs.)	18	1,125	21	1,560
10	Pride of the North	18	1,554	14	1,480		Early Leaming (2 yrs.)	14	875	15	800
11	Compton's Early	18	861	16	1,000						
12	Longfellow	18	696	16	1,770						

The average crop in 1907 of the twenty varieties of Indian corn on the Central Experimental Farm was 18 tons 911 lbs. per acre.

TURNIPS.

Twelve of the varieties of field turnips tested at Ottawa in 1907 are here reported upon. The seed was sown in drills two feet apart and the young plants thinned out to about seven inches apart in the rows. The seed was sown on May 23rd and the roots were pulled Oct. 22nd.

Number.	Varieties tested.	Average yield		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Kangaroo	33	976	32	100	7	Perfection Swede	29	1,992	31	400
2	Jumbo	33	625	33	300	8	Hall's Westbury	29	3	36	1,500
3	Mammoth Clyde	32	1,807	33	400	9	Halewood's Bronze Top	27	1,737	32	1,000
4	Good Luck	31	519	35	1,400	10	Skirvings	27	758	31	800
5	Hartley's Bronze	30	1,359	38	100	11	Carter's Elephant	27	449	30	200
6	Magnum Bonum	30	1,191	33	1,900	12	Bangholm Selected	24	527	28	1,000

The average yield in 1907 of the twelve varieties of turnips on the Central Experimental Farm was 33 tons 142 lbs. per acre.

MANGELS.

Ten sorts of mangels were tested at Ottawa in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about seven inches apart in the rows. The seed was sown May 23rd and the roots were pulled Oct. 21st.

Central Experimental Farm, Ottawa, Ontario.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Prize Mammoth Long Red	36	3	29	200	7	Giant Yellow Globe	28	96	28	1,700
2	Half Sugar White.....	33	1,145	18	300		(For less than 5 years.)				
3	Giant Yellow Intermediate	33	870	30	200		Perfection Mammoth Long Red (1 year)	.....		28	1,600
4	Selected Yellow Globe.....	33	468	30	600		Crimson Champion (1 yr.).	.....		27	1,800
5	Yellow Intermediate.....	32	487	25	1,100		Mammoth Red Inter.(1 yr.)	.....		23	200
6	Gate Post	30	280	31	1,100						

The average yield in 1907 of the ten varieties of mangels on the Central Experimental Farm was 27 tons 680 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Ottawa in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about five inches apart in the rows. The seed was sown May 23rd and the roots were pulled Oct. 23rd.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Improved Short White ...	27	758	30	900	4	Ontario Champion	26	602	27	1,100
2	Giant White Vosges.....	26	1,395	27	1,400	5	White Belgian	20	1,425	21	900
3	Mammoth White Intermediate	26	1,085	20	900	6	Half Long Chantenay ...	17	1,865	20	1,900

The average yield in 1907 of the six varieties of carrots on the Central Experimental Farm, was 24 tons, 1,517 lbs. per acre.

SUGAR BEETS.

Three varieties of sugar beets were tested at Ottawa in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about five inches apart in the rows. The seed was sown May 23rd and the roots were pulled Oct. 23rd.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs
1	Wanzleben	24	1,509	20	700	3	Vilmorin's Improved	22	1,871	23	1,200
2	French Very Rich	23	1,611	21	–						

The average yield in 1907, of the three varieties of sugar beets on the Central Experimental Farm was 21 tons 1,300 lbs. per acre.

Central Experimental Farm, Ottawa, Ontario.

POTATOES.

Twenty-eight kinds of potatoes grown at Ottawa are here mentioned.

For planting, the potatoes were cut into pieces with at least three eyes in each, and these pieces were planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows.

The potatoes were planted on May 28th and were dug October 15th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Bus.	Lbs.	Bus.	Lbs.		(For five years.)	Bus.	Lbs.	Bus.	Lbs.
1	Carman No. 1	314	10	184	48	17	Empire State	233	38	125	24
2	Dreer's Standard	299	38	151	48	18	Irish Cobbler	226	10	123	12
3	Canadian Beauty	294	48	149	36	19	Maule's Thoroughbred	225	17	125	24
4	Burnaby Mammoth	283	22	125	24	20	Early Rose	224	50	127	36
5	Late Puritan	280	17	138	36	21	Early White Prize	175	34	140	48
6	Holborn Abundance	279	50	169	24	22	Early Envoy	174	14	107	48
7	Sabean's Elephant	274	34	143	..	23	Bovee	155	19	129	48
8	Everett	263	7	156	12		(For less than five years.)				
9	Rochester Rose	262	41	132	..						
10	State of Maine	261	48	173	48		Dooley (3 years)	241	16	217	48
11	Vick's Extra Early	258	43	143	..		Vermont Gold Coin (3 years)	218	32	169	24
12	Reeves' Rose	252	7	125	24		Morgan Seeding (3 years)	213	24	145	12
13	American Wonder	251	57	140	48		Dalmeny Beauty (2 years)	270	36	327	48
14	Uncle Sam	251	14	112	12		Ashleaf Kidney (2 years)	137	30	123	12
15	Country Gentleman	249	55	187	48						
16	Money Maker	249	2	57	12						

The average crop in 1907 of the 28 varieties of potatoes on the Central Experimental Farm, was 148 bus., 22 lbs. per acre.

EXPERIMENTAL FARM, NAPPAN, N.S.

At the Experimental Farm at Nappan, Nova Scotia, the spring was cold and wet and consequently very backward. The earliest sowing of grain was on May 20th. There was good growing and ripening weather later in the season and notwithstanding much wet weather in September which was detrimental to the hay crop the grain crops were fairly good. Wheat and barley averaged about the same as last year, while oats gave much better returns than in 1906. Indian corn cut green for ensilage owing to unfavourable weather fell considerably short of an average crop. All field roots and potatoes gave liberal returns.

The plots of grain were one-fortieth of an acre. The yield per acre of the Indian corn, field roots and potatoes has been calculated from the crop obtained from two rows each 66 feet long.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) were grown at the Nappan Experimental Farm. The wheat was sown May 20th, the seed being used at the rate of about one and one-half bushels per acre.

Experimental Farm, Nappan, N. S.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Preston*	30	16	109	35	20	10	Herisson Bearded	24	16	108	25	20
2	White Fife	30	16	112	28	20	11	Percy*	23	52	111	26	40
3	White Russian	29	44	112	36	40		(For less than 5 years.)					
4	Red Fife	29	16	111	23	40							
5	Pringle's Champlain	28	..	108	25	40		Bishop* (3 yrs.)	29	7	107	22	40
6	Red Fern	28	..	109	40	40		Hungarian White (3 yrs.)	28	..	107	26	40
7	Stanley*	27	32	111	28	..		Riga* (2 yrs)	27	20	107	27	40
8	Colorado	25	48	107	23	20							
9	Huron*	24	40	110	27	20							

The average crop in 1907 of the fourteen varieties of spring wheat on the Experimental Farm at Nappan, N.S., was 28 bushels 26 lbs. per acre.

DURUM OR MACARONI WHEAT.

The durum wheats do not usually give very heavy crops in the rather moist climates of Eastern Canada. They are also very unpopular with most millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts for flour making and should only grow such quantities as they require for feed or to meet special demands.

Four varieties of durum wheat were grown at Nappan. The seed was sown on May 20th at the rate of about one and three quarter bushels to the acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For less than 5 years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Roumanian	22	8	110	32	..		Yellow Gharnovka (4 years)	19	10	107	25	20
2	Goose	20	30	109	24	40		Mahmoudi (4 years)	17	10	107	28	..

The average crop in 1907 of the four varieties of durum wheat on the Experimental Farm at Nappan, N.S., was 27 bushels 30 lbs. per acre.

EMMER AND SPELT.

Two varieties of emmer and two of spelt are here reported upon. The seed was sown on May 20th at the rate of about 120 lbs. to the acre. Common emmer is the grain sometimes referred to under the incorrect name of "Speltz."

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield for 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield for 1907.
	(For four years.)	Lbs.	Days.	Lbs.		(For four years.)	Lbs.	Days.	Lbs.
1	White Spelt	1,950	113	1,800	3	Common Emmer	1,385	106	1,860
2	Red Spelt	1,940	113	2,040	4	Red Emmer	1,110	112	1,280

The average crop in 1907 of the four varieties of emmer and spelt on the Experimental Farm at Nappan, N.S., was 1,745 lbs. per acre.

Experimental Farm, Nappan, N. S.

OATS.

Thirty-one varieties of oats tested at Nappan are here reported on.

The seed was sown on May 21st at the rate of about 2½ bushels per acre.

Number.	Varieties Tested.	Average Yield.		Average days maturing.	Yield in 1907.		Number.	Varieties Tested.	Average Yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Siberian	74	30	107	70	20	18	Golden Giant	64	20	111	77	22
2	Goldfinder	71	22	109	73	18	19	Abundance	64	8	105	72	12
3	Banner	70	24	104	74	4	20	White Giant	63	30	106	60	..
4	Twentieth Century	70	24	103	67	2	21	Kendal White*	63	20	106	74	24
5	Improved Ligowo	70	20	104	63	18	22	Kendal Black*	62	12	106	72	32
6	Joanette	69	22	103	68	28	23	American Beauty	62	8	106	71	6
7	Swedish Select	69	10	105	62	32	24	Wide Awake	61	14	105	61	6
8	Thousand Dollar	68	24	105	60	..	25	Tartar King	60	32	103	76	16
9	Golden Fleece	68	20	106	71	26	26	Columbus	60	4	106	65	30
10	Pioneer	68	8	102	68	8	27	Milford White*	58	..	106	74	4
11	Lincoln	68	4	105	61	26	28	Irish Victor	55	22	105	60	20
12	Improved American	67	30	106	75	10	29	American Triumph	54	4	111	63	18
13	Sensation	67	6	104	62	12							
14	Bavarian	66	16	105	67	2		(For less than 5 years.)					
15	Black Beauty	65	26	103	71	26							
16	Golden Beauty	65	10	105	71	26		Storm King (4 yrs)	54	9	102	65	30
17	Danish Island	65	2	106	67	22		Virginia White (2 yrs)	58	8	104	68	8

The average crop in 1907 of the thirty one varieties of oats on the Experimental Farm at Nappan, N.S., was 68 bushels 16 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed, grown at Nappan in 1907 are here mentioned.

These plots were all sown on May 22nd the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Mensury	48	24	95	41	32	10	Nugent*	40	4	97	35	..
2	Empire*	45	40	96	49	40	11	Yale*	40	..	97	33	16
3	Oderbruch	45	20	93	37	24	12	Mansfield*	38	20	97	38	20
4	Albert*	44	16	94	34	8	13	Claude*	38	12	94	31	32
5	Stella*	44	16	99	38	16	14	Champion	35	40	92	27	24
6	Trooper*	43	12	94	33	16							
7	Odessa	43	12	93	35	40		(For less than 5 years.)					
8	Argyle*	41	12	95	40	..							
9	Summit*	40	20	99	28	16		Blue Long Head (2 yr).	38	16	99	36	32

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Nappan N.S. was 35 bushels 24 lbs. per acre.

Experimental Farm, Nappan, N. S.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Daniel Chevalier	54	36	98	56	32	10	Gordon*	35	4	98	36	24
2	French Chevalier	50	36	98	58	16	11	Sidney*	33	40	98	29	8
3	Beaver*	46	34	97	46	32	12	Jarvis*	32	4	98	25	40
4	Logan*	40	32	98	42	22							
5	Dunham*	40	28	98	45	..		(For less than 5 yrs).					
6	Clifford*	39	34	98	43	16							
7	Invincible	39	2	99	34	8		Swedish Chevalier (3 years)	40	47	101	47	24
8	Canadian Thorpe	37	8	99	44	8							
9	Standwell	35	36	99	40	..							

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Nappan N. S. was 42 bushels 12 lbs. per acre.

PEAS.

Twenty varieties of peas were grown at Nappan as at the other farms. The quantity of seed used being from 2 to 3 bushels per acre depending on the size of the pea. These were harvested and left in the field in bundles to dry and on October 8th, they were exposed to a rain storm with a violent wind which mixed the varieties so badly that it was impossible to separate them so as to preserve their identity. Under the circumstances it has been thought best to introduce the table of last year which gives the average of the crops of peas for the five years, ending with 1906, also the crop of that year.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1906.		Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1906.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Archer*	30	52	113	18	40	11	Mackay*	26	40	113	19	20
2	Prince Albert	30	36	112	29	20	12	Black-eye Marrowfat	26	40	113	20	..
3	Agnes*	30	8	112	16	40	13	Daniel O'Rourke	26	28	110	19	..
4	Nelson*	29	36	111	18	40	14	Paragon*	26	16	111	35	20
5	Chancellor	29	24	105	18	..	15	Golden Vine	25	52	110	22	..
6	White Marrowfat	29	..	111	24	..	16	Prince*	25	52	113	30	..
7	Arthur*	28	40	109	17	20	17	Early Britain	25	12	109	28	.
8	Gregory*	28	..	114	26	..	18	Picton*	24	44	112	20	..
9	Victoria*	26	48	117	28	40	19	Wisconsin Blue	24	24	112	22	40
10	English Grey	26	48	112	14	40	20	Prussian Blue	23	..	110	19	..

The average crop in 1906 of the 20 varieties of peas, on the Experimental Farm at Nappan, was 22 bushels 22 lbs. per acre.

INDIAN CORN.

Twenty-one varieties of Indian corn were tested at Nappan during 1907. They were sown in rows about three feet apart and the plants thinned out to six to eight inches apart in the rows.

Experimental Farm, Nappan, N. S.

The seed was sown on June 14th and the crop was c t green for ensilage on October 23rd.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Eureka	19	1,820	13	730	14	Champion White Pearl	15	1,790	11	1,430
2	Red Cob Ensilage	19	16	11	1,870	15	Mammoth Cuban	15	1,780	12	750
3	Early Mastodon	18	1,840	12	1,300	16	Cloud's Early Yellow	15	988	8	1,600
4	Salzer's All Gold	18	1,334	12	1,850	17	North Dakota White	15	712	9	1,910
5	Giant Prolific Ensilage	18	850	13	950	18	White Cap Yellow Dent	14	1,810	8	1,820
6	Longfellow	17	1,702	11	1,650						
7	Superior Fodder	17	320	10	900		(For less than 5 years.)				
8	Angel of Midnight	17	194	9	1,580						
9	Selected Leaming	16	1,770	10	570		Early Leaming (2 years)	17	100	11	1,650
10	Pride of the North	16	1,330	8	1,600		Early Longfellow (2 years)	16	65	13	180
11	Early Butler	16	1,000	11	550		Wood's Northern Dent (2 years)	13	950	10	1,450
12	Compton's Early	16	824	9	1,030						
13	King Philip	16	748	10	570						

The average crop in 1907 of the twenty one varieties of Indian corn on the Experimental Farm at Nappan was 11 tons 283 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips tested at Nappan in 1907 are here reported upon. The seed was sown in drills two feet apart and the young plants thinned out to about 10 or 12 inches apart in the rows. The seed was sown on June 1st and the roots were pulled on November 9th.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons	Lbs.	Tons.	Lbs.
1	Perfection Swede	37	1,344	29	575	7	Halewood's Bronze Top	35	302	30	60
2	Magnum Bonum	36	1,420	29	80	8	Hall's Westbury	34	1,847	32	1,175
3	Jumbo	36	1,270	30	225	9	Carter's Elephant	34	873	31	1,525
4	Good Luck	36	765	34	1,465	10	Mammoth Clyde	34	136	26	1,295
5	Kangaroo	36	642	31	1,855	11	Skirvings	33	1,046	28	100
6	Hartley's Bronze	35	449	28	265	12	Bangholm Selected	32	1,355	26	635

The average yield in 1907 of the twelve varieties of turnips on the Experimental Farm at Nappan, N.S., was 29 tons 1,771 lbs. per acre.

MANGELS.

Ten varieties of mangels were tested at Nappan in 1907. The see was sown in drills two feet apart and the young plants were thinned out to 10 or 12 inches apart in the rows. The seed was sown on June 1st and the roots were pulled on October 26th.

Experimental Farm, Nappan, N. S.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.	(For less than 5 years.)	Tons.	Lbs.	Tons.	Lbs.
1	Yellow Intermediate	33	124	36	1,425	Mamm. Red Intermediate (1 year)	26	1,295	26	1,295
2	Giant Yellow Intermediate	32	468	38	1,385	Crimson Champion (1 year)	26	800	26	800
3	Half Sugar White	29	1,895	31	1,525	Perfection Mamm. Long Red (1 year)	25	1,480	25	1,480
4	Prize Mamm. Long Red	29	1,019	32	1,175					
5	Selected Yellow Globe	28	1,303	28	925					
6	Giant Yellow Globe	27	1,505	27	450					
7	Gate Post	25	704	36	600					

The average yield in 1907 of the ten varieties of mangels on the Experimenta' Farm at Nappan, N.S., was 28 tons 1,059 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Nappan in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on June 15th and the roots were pulled on October 26th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
		Tons.	Lbs.	Tons.	Lbs.			Tons.	Lbs.	Tons.	Lbs.
1	Ontario Champion	19	423	17	815	4	Half Long Chantenay	17	73	16	505
2	Giant White Vosges	18	780	15	30	5	White Belgian	16	1,823	14	50
3	Mamm. White Intermediate	18	452	14	1,700	6	Improved Short White	16	906	16	835

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Nappan, N.S., was 15 tons 1,322 lbs. per acre.

SUGAR BEETS.

Three varieties of sugar beets were tested at Nappan in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on June 1st and the roots were pulled on October 26th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Wanzleben	17	900	15	195	3	French Very Rich	14	1,516	12	1,575
2	Vilmorin's Improved	17	276	13	730						

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Nappan, N.S., was 13 tons 1,500 lbs. per acre.

Experimental Farm, Nappan, N.S.

POTATOES.

Twenty-eight kinds of potatoes grown at Nappan are here mentioned.

For planting, the potatoes were cut into pieces with two or three eyes in each, and these pieces were planted in rows two and a half feet apart, the sets being planted about a foot apart in the rows.

The potatoes were planted on June 3rd and were dug October 9th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Bus.	Lbs.	Bus.	Lbs.		(For five years.)	Bus.	Lbs.	Bus.	Lbs.
1	Vick's Extra Early	474	19	532	24	17	Country Gentleman	334	24	367	24
2	Rochester Rose	432	58	576	24	18	American Wonder	325	36	396	..
3	Everett	388	58	561	..	19	Uncle Sam	322	5	299	12
4	Late Puritan	383	14	484	..	20	Bovee	311	58	303	36
5	Empire State	369	10	418	..	21	Dreer's Standard	299	12	349	48
6	Holborn Abundance	368	43	490	36	22	Early Rose	298	19	358	36
7	Carman No. 1	365	12	470	48	23	Reeve's Rose	279	50	374	..
8	Burnaby Mammoth	363	53	455	24						
9	State of Maine	362	17	323	24		(For less than five years.)				
10	Canadian Beauty	355	58	479	36						
11	Irish Cobbler	354	53	301	24		Vermont Gold Coin (3 yrs.)	519	56	543	24
12	Money Maker	350	53	407	..		Dooley (3 yrs.)	435	36	473	..
13	Early White Prize	342	46	433	24		Morgan Seedling (3 yrs.)	404	48	433	24
14	Early Envoy	342	46	341	..		Ashleaf Kidney (3 yrs.)	398	12	409	12
15	Maule's Thoroughbred	336	10	396	..		Dalmeny Beauty (2 yrs.)	307	54	334	12
16	Sabean's Elephant	334	50	363	..						

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Nappan, N.S., was 416 bushels 58 lbs. per acre.

EXPERIMENTAL FARM, BRANDON, MANITOBA.

At the Experimental Farm at Brandon, the spring work was much delayed by cold and wet weather. The first spring wheat was not sown until the 9th of May, which was several weeks later than usual. Oats were not sown until May 20th, and barley May 27th. Notwithstanding this lateness in seeding, the crops under the influence of more favourable weather made rapid progress and matured before serious frost. The trial plots of wheat gave an average of 38 bush. 8 lbs. per acre, oats 114 bush. 24 lbs., six-rowed barley 64 bush. 1 lb. and two-rowed barley 63 bush. 17 lbs. per acre. Indian corn and field roots have given about an average crop and potatoes a yield above the average.

The plots of grain were one-twentieth of an acre each. The yield per acre of the Indian corn and field roots has been calculated from the crop obtained from two rows each 66 feet long. In the case of potatoes one row 66 feet long has been used.

Experimental Farm, Brandon, Man.

SPRING WHEAT

Fourteen varieties of spring wheat (exclusive of the durum wheats) grown at the Brandon Experimental Farm, are here reported on. The wheat was sown May 9th and 10th—the seed being used at the rate of about one and one-half bushels per acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Red Fife	38	4	123	44	..	10	Colorado	29	24	123	34	40
2	Preston*	38	2	123	37	30	11	Red Fern	28	40	123	28	50
3	Huron*	37	52	123	39	30		(For less than 5 years.)					
4	White Fife	36	50	126	42	40							
5	Pringle's Champlain	35	24	121	37	20		Bishop* (3 years)	38	27	118	36	10
6	Stanley*	34	2	121	39	..		Hungarian White (3 years)	36	40	124	36	50
7	Percy*	34	..	122	36	20		Riga* (2 years)	37	15	113	39	40
8	White Russian	33	36	124	40	20							
9	Herisson Bearded	33	4	123	39	12							

The average crop in 1907 of the fourteen varieties of spring wheat on the Experimental Farm at Brandon, Man., was 38 bushels 8 lbs. per acre.

DURUM OR MACARONI WHEAT.

While the durum wheats average usually heavier crops in the Canadian Northwest than they do in Eastern Canada, they are very unpopular with most millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts for flour making and should only grow such quantities as they require for feed, or to meet special demands.

Four varieties of durum wheat were grown at Brandon. The seed was sown on May 10th at the rate of about one and three quarter bushels to the acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.	(For less than 5 yrs.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Goose	49	52	128	44	20	Yellow Gharnovka (4 years)	48	25	126	39	40
2	Roumanian	48	..	127	45	40	Mahmoudi (4 years)	44	10	127	39	..

The average crop in 1907 of [illegible] four varieties of durum wheat on the Experimental Farm at Brandon, Man. was [illegible] 10 lbs. per acre.

Experimental Farm, Brandon, Man.

EMMER AND SPELT.

Two varieties of emmer and two of spelt are here reported upon. The seed was sown on May 10th at the rate of about 120 lbs. to the acre. Common emmer is the grain sometimes referred to under the incorrect name of "Spelts."

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For four years.)	Lbs.	Days.	Lbs.		(For four years.)	Lbs.	Days.	Lbs.
1	Common Emmer.....	3,405	126	2,820	3	Red Emmer.....	2,552	130	1,930
2	Red Spelt....	2,655	129	1,940	4	White Spelt.	1,995	129	1,720

The average crop in 1907 of the four varieties of emmer and spelt on the Experimental Farm at Brandon, Man., was 2,103 lbs. per acre.

OATS.

Thirty one of the varieties of oats tested at Brandon are here reported on. The seed was sown on May 20th at the rate of about two bushels to the acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Improved American..	119	28	110	126	..	18	Irish Victor.....	107	8	108	110	30
2	Golden Giant.....	117	12	115	120	6	19	Black Beauty.....	104	18	108	114	14
3	Banner	116	4	111	128	28	20	Twentieth Century...	102	30	109	104	4
4	Danish Island.....	116	..	111	130	..	21	Kendal White*	102	20	110	104	24
5	White Giant	115	30	110	126	26	22	Joanette.....	102	6	111	127	2
6	Golden Beauty	115	20	111	125	20	23	Pioneer	100	2	108	96	16
7	Abundance.....	113	20	111	110	20	24	Tartar King	99	30	107	90	20
8	Lincoln....	113	2	110	122	2	25	Kendal Black*.....	96	30	114	122	2
9	Siberian	112	4	112	115	20	26	Sensation.....	96	16	109	109	24
10	Wide Awake.....	111	28	112	104	18	27	Improved Ligowo....	94	16	108	105	20
11	Columbus...	110	32	110	122	2	28	Milford White*... .	90	26	112	109	14
12	American Triumph...	110	28	112	116	26	29	Swedish Select.	85	..	107	90	4
13	Goldfinder.....	110	18	112	127	32							
14	Bavarian	110	18	111	119	4		(For less than 5 years.)					
15	Golden Fleece.	109	32	108	121	16							
16	American Beauty.....	108	30	109	100	30		Storm King (4 yrs.). .	99	7	109	111	6
17	Thousand Dollar.....	108	26	109	109	14		Virginia White (2 yrs.)	102	32	105	117	32

The average crop in 1907 of the thirty-one varieties of oats on the Experimental Farm at Brandon was 114 bushels 24 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley were grown at Brandon in 1907. These plots were all sown on May 27th the seed being used at the rate of about two bushels per acre.

Experimental Farm, Brandon, Man.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average Yield		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Odessa	64	40	88	71	12	10	Argyle*	56	24	91	33	26
2	Yale*	64	18	90	65	20	11	Albert*	57	20	80	59	28
3	Mensury	63	40	90	63	36	12	Stella*	56	32	91	63	16
4	Mansfield*	62	16	91	67	24	13	Trooper*	53	20	91	50	30
5	Summit*	61	12	92	71	12	14	Champion	37	10	85	35	..
6	Empire*	60	30	91	70	20		(For less than 5 years.)					
7	Claude*	60	24	90	75	20							
8	Odenbruch	60	..	88	81	12		Blue Long Head 3 yrs.	65	33	93	67	44
9	Nugent*	60	..	90	54	8							

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Brandon, Man., was 64 bushels 1 lb. per acre.

TWO ROWED BARLEY.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Jarvis*	57	36	91	72	4	9	Sidney*	51	24	91	64	8
2	Standwell	56	16	95	79	8	10	Invincible	50	28	93	52	34
3	Gordon*	53	40	93	48	6	11	Logan*	50	4	93	59	28
4	Danish Chevalier	53	8	95	70	2[illegible]	12	Beaver*	46	26	93	45	..
5	French Chevalier	52	16	95	67	44		(For less than 3 years.)					
6	Dunham*	52	4	92	59	28							
7	Canadian Thorpe	51	44	93	71	42		Swedish Chevalier, 3 yrs	62	37	95	78	36
8	Clifford*	51	44	92	[illegible]	8							

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Brandon, Man., was 63 bushels 17 lbs. per acre.

Experimental Farm, Brandon, Man.

PEAS.

Twenty varieties of peas were grown at Brandon in 1907. These plots were sown on May 15th, the quantity of seed used being from 2 to 3 bushels per acre depending on the size of the pea.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Mackay *	55	28	130	46	20	11	Wisconsin Blue	47	8	126	40	20
2	Early Britain	54	14	127	39	50	12	Black eye Marrowfat	46	48	128	37	20
3	Victoria *	51	6	129	46	10	13	Chancellor	46	28	118	46	..
4	Arthur *	50	8	124	38	20	14	Archer *	45	58	133	38	20
5	Gregory *	49	56	129	48	20	15	Daniel O'Rourke	45	54	129	41	30
6	Picton *	49	46	129	43	40	16	Nelson *	45	48	126	46	20
7	Paragon * †	49	38	125	43	10	17	White Marrowfat	45	40	131	27	..
8	Golden Vine	49	22	126	41	20	18	Prince Albert	44	28	133	39	40
9	Prince *	48	36	132	44	..	19	Prussian Blue	44	22	123	36	50
10	English Grey	48	24	131	39	20	20	Agnes *	40	8	129	24	40

The average crop in 1907 of the twenty varieties of peas on the Experimental Farm at Brandon, Man., was 40 bushels 25 lbs. per acre.

INDIAN CORN.

Twenty-one varieties of Indian corn were tested at Brandon during 1907. They were sown in rows about three feet apart and the plants thinned out to 6 to 8 inches apart in the rows.

The seed was sown on June 6th, and the crop was cut green for ensilage on September 10th. This crop needs frequent cultivation throughout the summer to produce the best results.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Longfellow	21	1,468	20	1,778	14	Early Mastodon	18	366	19	214
2	Superior Fodder	20	1,950	17	452	15	White Cap Yellow Dent	17	1,270	17	56
3	Eureka	20	1,444	17	848	16	Cloud's Early Yellow	17	492	18	234
4	Angel of Midnight	20	944	20	510	17	Selected Leaming	17	294	20	788
5	Compton's Early	20	313	19	412	18	Mammoth Cuban	16	155	13	1,720
6	North Dakota White	19	1,376	20	1,382						
7	King Philip	19	1,059	21	966		(For less than five years.)				
8	Early Butler	19	861	19	16						
9	Champion White Pearl	19	610	15	690		Early Leaming (2 yrs.)	18	828	20	1,184
10	Salzer's All Gold	19	254	20	1,580		Wood's Northern Dent (2 years)	18	399	21	174
11	Giant Prolific Ensilage	19	108	18	1,422		Early Longfellow (2 yrs.)	16	835	14	1,502
12	Red Cob Ensilage	18	1,528	13	334						
13	Pride of the North	18	524	17	254						

The average crop in 1907 of the twenty-one varieties of Indian corn on the Experimental Farm at Brandon, Man., was 18 tons 786 lbs. per acre.

Experimental Farm, Brandon, Man.

TURNIPS.

Twelve varieties of field turnips were tested at Brandon in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 10 to 12 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled October 28th.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Good Luck	32	838	26	1,856	7	Bangholm Selected	29	1,822	25	1,216
2	Hall's Westbury	31	1,307	33	1,848	8	Carter's Elephant	29	1,136	26	1,328
3	Magnum Bonum	31	410	28	496	9	Jumbo	28	1,605	24	840
4	Perfection Swede	30	34	34	904	10	Skirvings	28	1,394	32	1,208
5	Hartley's Bronze	29	1,875	25	952	11	Halewood's Bronze Top	28	1,341	31	40
6	Mammoth Clyde	29	1,822	32	1,736	12	Kangaroo	26	1,434	24	1,632

The average yield in 1907 of the twelve varieties of turnips on the Experimental Farm at Brandon, Man., was 28 tons 1,838 lbs. per acre.

MANGELS.

Ten varieties of mangels were tested at Brandon in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to 10 to 12 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled on October 23rd.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.	(For less than 5 years.)	Tons.	Lbs.	Tons.	Lbs.
1	Prize Mamm. Long Red	32	1,578	27	1,704	Perfection Mamm. Long Red (1 year)	24	840	24	840
2	Half Sugar White	31	1,307	24	576	Crimson Champion (1 year)	20	128	20	128
3	Yellow Intermediate	30	1,987	23	992	Mamm. Red Intermediate (1 year)	17	1,640	17	1,640
4	Gate Post	30	826	26	536					
5	Selected Yellow Globe	28	74	22	1,408					
6	Giant Yellow Intermediate	27	437	23	1,520					
7	Giant Yellow Globe	25	794	19	16					

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Brandon, Man., was 22 tons 1,936 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Brandon in 1907. The seed was sown in drills, two feet apart and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled on October 29th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Improved Short White	26	888	24	400	4	Mamm. White Intermediate	22	528	20	700
2	Ontario Champion	24	1,280	20	480	5	White Belgian	20	1,052	15	1,9[illegible]0
3	Giant White Vosges	22	1,232	18	960	6	Half Long Chantenay	18	80	15	800

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Brandon, Man., was 19 tons 207 lbs per acre.

Experimental Farm, Brandon, Man.

SUGAR BEETS.

Three varieties of sugar beets were tested at Brandon in 1907. The seed was sown in drills, two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled on October 23rd.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Wanzleben	22	141	18	1,224	3	French Very Rich	17	690	13	1,984
2	Vilmorin's Improved	17	1,851	18	696						

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Brandon, Man., was 16 tons 1,968 lbs. per acre.

POTATOES.

Twenty-eight kinds of potatoes grown at Brandon in 1907 are here mentioned.

For planting the potatoes were cut into pieces with two or three eyes in each and these pieces were planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows. The potatoes were planted on May 23rd and were dug on October 10th and 12th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Bus.	Lbs.	Bus.	Lbs.		(For five years.)	Bus.	Lbs.	Bus.	Lbs.
1	Late Puritan	572	22	509	40	17	Everett	431	56	454	40
2	State of Maine	563	12	550	..	18	Early Envoy	419	50	544	30
3	Uncle Sam	562	50	533	30	19	Early White Prize	397	6	460	10
4	Dreer's Standard	549	26	361	10	20	Vick's Extra Early	372	54	394	10
5	Money Maker	548	10	489	30	21	Early Rose	370	20	390	30
6	American Wonder	545	36	403	20	22	Bovee	368	8	220	..
7	Empire State	523	14	485	50	23	Rochester Rose	358	14	339	10
8	Sabean's Elephant	519	34	445	30						
9	Maule's Thoroughbred	512	14	460	10		(For less than 5 years.)				
10	Holborn Abundance	506	..	495	..						
11	Canadian Beauty	503	4	392	20						
12	Country Gentleman	502	20	425	20		Morgan Seedling (3 years)	532	17	423	30
13	Reeves' Rose	499	24	421	40		Vermont Gold Coin (3 yrs)	521	53	447	20
14	Irish Cobbler	477	2	438	10		Dooley (3 years)	377	40	366	40
15	Carman No. 1	470	48	421	40		Ashleaf Kidney (2 years)	383	10	425	20
16	Burnaby Mammoth	437	4	352	..		Dalmeny Beauty (2 yrs.)	320	50	330	..

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Brandon, Man., was 427 bus., 53 lbs. per acre.

EXPERIMENTAL FARM, INDIAN HEAD, SASK.

The unfavourable character of the season has resulted in injury to the wheat grown at Indian Head. The cold and backward weather made seeding very late, and low temperatures and wet weather during the ripening period interfered seriously with the rapid progress towards maturity, which grain in that district usually makes. There

were slight frosts on the nights of August 3rd and August 21st, when the standard thermometer at the Experimental Farm registered 35 F. and 33 F. respectively. Some slight injury was done to a few of the more tender flowers and vegetables but no harm was done to the grain. On September 12th two degrees of frost were registered and on September 21st three degrees. Prior to this heavy rains had fallen and low temperatures prevailed so that for two weeks the grain scarcely made any progress in ripening. The frost of the 12th was preceded by a rain of 20 hours during which 1·25 inches fell. This frost under such conditions no doubt did considerable injury which was further aggravated by the frost of the 21st when the temperature fell below freezing early in the evening and continued low all night.

With such an experience it is surprising that more serious injury was not done. The crop of the plots of spring wheat averaged 19 bush. 7 lbs. per acre as compared with 42 bush. 4 lbs. in 1906, and the effect of the frost could be plainly seen on most of the varieties. They have however a high percentage of germinating power, the 14 varieties under trial averaging 85 per cent, showing that they would make fair seed. The 31 varieties of oats under test this year gave a remarkably high average crop 110 bush. 20 lbs. per acre. The crops of barley both six-rowed and two rowed were excellent, and exceeded the average of last year by over six bushels per acre, while peas gave an average increase of about 5 bushels. With very few exceptions the germination of these numerous varieties is high and the weights per bushel show that the grain has been well matured. The weather was unsuitable for Indian corn and there was an average falling off in that crop of nearly 4 tons per acre. An average increase in field roots and potatoes however compensated for this.

The plots of grain were one-twentieth of an acre each. The yield per acre of the Indian corn and field roots has been calculated from the crop obtained from two rows each 66 feet long. In the case of potatoes one row 132 feet long has been used.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) have been grown at the Indian Head Experimental Farm. The wheat was sown on May 6th, the seed being used at the rate of about one and one-half bushels per acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days	Bu.	Lbs.
1	Red Fern	39	39	133	15	40	10	Colorado	32	30	131	25	20
2	Preston*	37	58	130	23	20	11	Herisson Bearded	30	27	136	19	..
3	Stanley*	37	23	130	19	40							
4	White Fife	36	49	137	17	20		(For less than 5 years.)					
5	Percy*	36	27	130	21	40							
6	Hurum*	36	25	129	21	.		Bishop* 3 years	36	47	130	23	20
7	Red Fife	34	59	137	12	..		Hungarian White 3 years	23	47	133	13	20
8	White Russian	33	56	134	15	20		Riga* 2 years	26	30	124	17	40
9	Pringle's Champlain	32	37	133	23	..							

The average crop in 1907 of the fourteen varieties of spring wheat on the Experimental Farm at Indian Head, Sask., was 19 bushels 7 lbs. per acre.

Experimental Farm, Indian Head, Sask.

DURUM OR MACARONI WHEAT.

While the durum wheats average usually heavier crops in the Canadian Northwest than they do in Eastern Canada, they are very unpopular with most millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts for flour making, and should only grow such quantities as they require for feed or to meet special demands.

Four varieties of durum wheat were grown at the Indian Head farm in 1907. The seed was sown May 7th at the rate of about one and three quarter bushels to the acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For less than 5 years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Goose	43 27	135	31 40		Yellow Gharnovka (4 yrs.).....	43 55	135	29 20
2	Roumanian.....	42 50	136	31 ..		Mahmoudi (4 yrs.)....	42 22	135	25 40

The average crop in 1907 of the four varieties of durum wheat on the Experimental Farm at Indian Head, Sask., was 29 bushels 25 lbs. per acre.

EMMER AND SPELT.

Two varieties of emmer and two of spelt were tested here. The seed was sown on May 13th at the rate of about 120 lbs. to the acre. Common emmer is the grain sometimes referred to under the incorrect name of "Speltz."

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For four years.)	Lbs.	Days.	Lbs.		(For four years.)	Lbs.	Days.	Lbs.
1	Common Emmer....	2,820	129	2,020	3	White Spelt	2,295	131	1,560
2	Red Spelt	2,735	130	2,200	4	Red Emmer.....	2,215	131	1,320

The average crop in 1907 of the four varieties of emmer and spelt on the Experimental Farm at Indian Head, Sask., was 1,775 lbs. per acre.

OATS.

Thirty-one of the varieties of oats tested at Indian Head are here reported upon. The seed was sown on May 14th at the rate of about two bushels to the acre.

Experimental Farm, Indian Head, Sask.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Banner	121	18	120	122	32	18	Lincoln	103	14	121	106	16
2	Golden Beauty	113	7	120	121	6	19	Milford White*	103	10	123	98	8
3	Goldfinder	113	2	124	112	32	20	Pioneer	102	31	120	103	18
4	Kendal White*	111	22	122	116	16	21	Abundance	101	18	118	102	12
5	Irish Victor	111	10	121	119	14	22	Thousand Dollar	101	18	118	129	..
6	Columbus	111	9	121	127	22	23	American Beauty	101	3	119	103	18
7	Bavarian	110	14	120	117	22	24	Wide Awake	100	33	118	101	16
8	Danish Island	108	32	118	123	8	25	Joanette	100	20	124	93	8
9	White Giant	108	31	118	104	4	26	Siberian	97	29	124	108	28
10	American Triumph	108	22	121	105	20	27	Tartar King	97	25	120	108	18
11	Golden Giant	107	32	125	105	16	28	Kendal Black*	97	22	124	82	12
12	Improved Ligowo	107	23	118	122	2	29	Black Beauty	92	4	120	92	32
13	Improved American	107	3	121	117	2		(For less than 5 years.)					
14	Golden Fleece	106	17	122	112	12		Storm King (4 years)	92	32	121	88	8
15	Twentieth Century	105	28	119	118	..		Virginia White (2 yrs.)	99	4	123	110	20
16	Swedish Select	105	..	119	127	22							
17	Sensation	104	9	120	127	32							

The average crop in 1907 of the thirty-one varieties of oats on the Experimental Farm at Indian Head, Sask., was 110 bushels 20 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley grown at Indian Head are here reported upon. These plots were all sown on May 14th and 15th, the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Claude*	63	34	105	65	30	10	Argyle*	59	18	102	65	30
2	Mansfield*	63	3	102	72	14	11	Trooper*	59	13	103	58	46
3	Yale*	62	6	106	67	4	12	Summit*	55	24	105	42	44
4	Nugent*	61	10	105	55	30	13	Albert*	51	34	102	51	12
5	Mensury	61	2	103	61	2	14	Champion	42	19	98	47	24
6	Odessa	60	32	103	41	32		(For less than 5 years.)					
7	Stella*	60	23	105	52	4		Blue Long Head (3 yrs.)	74	31	103	86	2
8	Oderbruch	59	31	101	68	26							
9	Empire*	59	26	104	66	22							

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Indian Head, Sask., was 60 bushels 9 lbs. per acre.

Experimental Farm, Indian Head, Sask.

TWO ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Invincible	65	10	111	54	28	10	Logan*	52	3	104	56	12
2	Standwell	64	17	110	59	8	11	French Chevalier	51	26	112	36	12
3	Danish Chevalier	59	32	112	58	16	12	Dunham*	45	29	107	48	16
4	Gordon*	57	7	105	54	28		(For less than 5 years).					
5	Canadian Thorpe	56	18	107	51	32							
6	Jarvis*	54	19	105	61	2		Swedish Chevalier (3 years)	53	40	110	54	28
7	Beaver*	54	9	111	51	32							
8	Sidney*	53	24	103	50	30							
9	Clifford*	52	40	104	53	36							

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Indian Head, Sask., was 53 bushels 7 lbs. per acre.

PEAS.

Twenty of the varieties of peas grown at Indian Head are here reported upon. These plots were sown on May 20th, the quantity of seed used being from two to three bushels per acre depending on the size of the pea.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Early Britain	53	38	119	51	..	11	Archer*	49	10	121	40	..
2	Prussian Blue	52	54	118	47	40	12	Paragon*†	48	48	118	43	20
3	Golden Vine	51	42	116	48	.	13	Gregory*	48	18	121	45	40
4	Chancellor	51	22	116	51	40	14	Prince*	46	14	119	38	.
5	Black Eye Marrowfat	51	10	122	48	40	15	Wisconsin Blue	46	2	121	37	20
6	Daniel O'Rourke	51	6	116	49	20	16	Nelson*	45	46	118	38	20
7	English Grey	51	2	119	45	..	17	Arthur*	44	18	117	36	..
8	Mackay*	50	54	122	47	20	18	White Marrowfat	43	42	119	33	..
9	Picton*	49	34	118	38	40	19	Prince Albert	43	10	120	38	20
10	Agnes*	49	30	118	43	40	20	Victoria*	40	54	120	39	40

The average crop in 1907 of the twenty varieties of peas on the Experimental Farm at Indian Head, Sask., was 43 bushels 2 lbs. per acre.

INDIAN CORN.

Twenty-one varieties of Indian corn were tested at Indian Head in 1907. The seed was sown in rows about three feet apart, and the plants thinned out to 6 to 8 inches apart in the rows.

Experimental Farm, Indian Head, Sask.

The seed was sown on May 29th and the crop was cut green for ensilage on September 21st. This crop needs frequent cultivation throughout the summer to produce the best results.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	lbs.	Tons.	lbs.		(For five years.)	Tons.	lbs.	Tons.	lbs.
1	Angel of Midnight	18	58	13	1,170	14	White Cap Yellow Dent	12	1,190	7	300
2	Eureka	16	1,000	12	200	15	Early Butler	12	750	9	1,250
3	North Dakota White	16	10	13	400	16	Early Mastodon	12	244	4	1,900
4	Compton's Early	15	1,680	13	400	17	Mammoth Cuban	11	484	7	300
5	Salzer's All Gold	15	1,020	11	...	18	Cloud's Early Yellow	10	1,824	8	1,820
6	King Philip	14	1,216	11	1,650		(For less than five years.)				
7	Longfellow	14	534	11	...						
8	Giant Prolific Ensilage	14	336	12	1,850		Early Longfellow (2 years)	13	675	12	1,300
9	Red Cob Ensilage	14	160	12	1,300		Early Leaming (2 years)	11	1,320	11	770
10	Pride of the North	13	1,500	5	780		Wood's Northern Dent (2 years)	10	845	10	350
11	Champion White Pearl	13	422	6	430						
12	Superior Fodder	13	224	6	1,200						
13	Selected Leaming	12	1,692	9	700						

The average crop in 1907 of the twenty-one varieties of Indian corn on the Experimental Farm at Indian Head, was 10 tons, 99 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips were tested at Indian Head in 1907. The seed was sown in drills two and a half feet apart, and the young plants thinned out to about 10 to 12 inches apart in the rows. The seed was sown on May 27th, and the roots were pulled on October 9th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Hartley's Bronze	25	1,657	31	832	7	Bangholm Selected	23	402	22	1,012
2	Hall's Westbury	25	1,063	25	28	8	Carter's Elephant	22	1,670	21	768
3	Halewood's Bronze Top	25	81	25	1,084	9	Mammoth Clyde	22	780	27	1,440
4	Perfection Swede	24	1,947	23	1,124	10	Jumbo	22	77	20	1,448
5	Skirvings	24	1,255	25	424	11	Magnum Bonum	21	1,622	20	260
6	Good Luck	23	1,184	28	1,288	12	Kangaroo	19	1,685	21	1,956

The average yield in 1907, of the twelve varieties of turnips on the Experimental Farm at Indian Head, Sask., was 24 tons 972 lbs. per acre.

MANGELS.

Ten varieties of Mangels were tested at Indian Head in 1907. The seed was sown in drills two and a half feet apart and the young plants were thinned out to 10 to 12

inches apart in the rows. The seed was sown May 27th and the roots were pulled on September 30th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Giant Yellow Intermediate	26	904	19	412	7	Gate Post	20	1,882	14	1,040
2	Half Sugar White	25	640	18	828		(For less than 5 years.)				
3	Selected Yellow Globe	24	835	13	1,192		Crimson Champion (1 yr.)	16	1,132	16	1,132
4	Giant Yellow Globe	24	606	17	188		Mamm. Red Inter. (1 yr.)	16	736	16	736
5	Yellow Intermediate	23	76	10	1,120		Perfection Mamm. Long Red (1 year)	16	208	16	208
6	Prize Mamm. Long Red	23	676	18	36						

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Indian Head, Sask., was 16 tons 89 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Indian Head in 1907. The seed was sown in drills two feet apart, and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 22nd, and the roots were pulled on October 11th. One of the varieties sown, the Mammoth White Intermediate did not germinate.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Ontario Champion	15	324	12	552		The Mammoth White Intermediate carrot was also sown but failed to germinate.				
2	Half Long Chantenay	13	330	12	1,608						
3	Improved Short White	12	1,802	13	268						
4	Giant White Vosges	12	1,432	6	1,992						
5	White Belgian	11	1,390	6	1,200						

The average yield in 1907 of the five varieties of carrots on the Experimental Farm at Indian Head, Sask., was 10 tons 722 lbs. per acre.

SUGAR BEETS.

Three varieties of Sugar beets were tested at Indian Head in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 27th, and the roots were pulled on October 10th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Vilmorin's Improved	14	1,116	13	400	3	Wanzleben	13	1,625	11	704
2	French Very Rich	13	1,834	11	1,364						

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Indian Head, Sask., was 12 tons, 156 lbs. per acre.

Experimental Farm, Indian Head, Sask.

POTATOES.

Twenty-eight kinds of potatoes were grown at Indian Head in 1907. For planting, the potatoes were cut into pieces with two or three eyes in each, and these pieces were planted in rows two and a half feet apart and about a foot apart in the rows. The potatoes were planted on May 23rd and were dug on September 30th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Bus.	Lbs.	Bus.	Lbs.		(For five years.)	Bus.	Lbs.	Bus.	Lbs.
1	Uncle Sam	433	31	385	..	16	Canadian Beauty	386	53	363	..
2	Carman No. 1	432	49	466	24	17	State of Maine	379	24	248	36
3	Burnaby Mammoth	427	..	411	24	18	Early Envoy	371	39	378	24
4	Late Puritan	425	15	328	24	19	Early White Prize	361	43	360	48
5	Reeves' Rose	419	32	415	48	20	Maule's Thoroughbred	361	37	167	12
6	American Wonder	418	34	371	48	21	Irish Cobbler	342	42	294	48
7	Country Gentleman	417	11	345	24	22	Early Rose	331	16	275	..
8	Empire State	415	18	409	12	23	Bovee	304	28	308	..
9	Rochester Rose	415	13	334	24		(For less than five years.)				
10	Sabean's Elephant	408	27	319	..		Vermont Gold Coin . 3 years	459	16	391	36
11	Everett	408	21	411	24		Morgan Seedling . . . 3 years	366	52	323	24
12	Dreer's Standard	397	37	321	12		Dooley . . . . . 3 years	260	32	149	36
13	Moneymaker	393	34	308	..		Ashleaf Kidney . . . . . 2 years	428	46	486	12
14	Vick's Extra Early	391	43	327	48		Dalmeny Beauty . . . . 2 years	329	57	235	24
15	Holborn Abundance	389	21	336	36						

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Indian Head, Sask., was 338 bushels 10 lbs. per acre.

EXPERIMENTAL FARM, AGASSIZ, B.C.

At the Experimental Farm at Agassiz the sowing of grain in 1907, was delayed for the reason that the weather during the early months was wet and cold. Hot weather during June, July and the first half of August hastened the ripening of the crops and the results were fully up to the average. The usual plots of spring wheat were not sown this year owing to the continued ravages of the wheat midge *Diplosis tritici*. By thus ceasing to grow wheat for a season we hope to be able to get rid of this insect pest and to resume the cultivation of the trial plots of wheat next year as usual.

The 31 varieties of oats have given an average crop of 66 bushels 16 lbs. per acre. The crops of barley are above the average while those of Indian corn and field roots are well up to the average. Potatoes have given excellent yields averaging 474 bush. 25 lbs. per acre.

The plots of grain occupied one-fortieth of an acre each. The yield of Indian corn has been calculated from the weight obtained from two rows each 66 feet long, cut green for ensilage; and the returns given for the field roots have been computed from a similar area.

Experimental Farm, Agassiz, B.C.

SPRING WHEAT.

The spring wheat plots, also the plots of durum wheat and of emmer and spelt at the Experimental Farm at Agassiz were so much injured by the wheat midge *Diplosis tritici* as to make the tests for 1906 as to the relative productiveness of the varieties of no value. In 1907 with the object of getting rid of this insect the plots of wheat were discontinued. Under the circumstances it is thought best to give here the average yields on the plots for the five years ending 1905.

Number.	Varieties tested.	Average Yield.		Number.	Varieties tested.	Average Yield.	
	(For five years ending 1905.)	Bu.	Lbs.		(For five years ending 1905.)	Bu.	Lbs.
1	Stanley*	35	14	7	Percy*	31	53
2	Colorado	34	14	8	Red Fern	30	27
3	White Russian	33	27	9	Huron*	30	26
4	Red Fife	33	9	10	Herisson Bearded	30	17
5	White Fife	32	47	11	Pringle's Champlain	28	52
6	Preston*	32	39				

DURUM OR MACARONI WHEAT.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Varieties tested.	Average Yield.		Average days maturing.
	(For 5 years ending 1905.)	Bu.	Lbs.	Days.	(For 2 years ending 1905.)	Bu.	Lbs.	Days.
1	Roumanian	33	36	120	Mahmoudi	19	20	117
2	Goose	32	50	115	Yellow Gharnovka	18	..	117

EMMER AND SPELT.

In this instance the yield is expressed in pounds per acre, the grain being of course weighed with the husk adhering.

Number.	Varieties tested.	Average yield.	Average days maturing.	Number.	Varieties tested.	Average yield.	Average days maturing.
	(For two years ending 1905.)	Lbs.	Days.		(For two years ending 1905.)	Lbs.	Days.
1	Common Emmer	1,880	117	3	Red Emmer	1,660	117
2	White Spelt	1,775	117	4	Red Spelt	1,555	117

Experimental Farm, Agassiz, B. C.

OATS.

Thirty one varieties of oats tested at Agassiz are here reported upon. The seed was sown on April 19th at the rate of about two bushels to the acre.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Abundance	74	8	114	84	22
2	Golden Fleece	72	32	114	67	22
3	Danish Island	69	12	117	91	6
4	Milford White*	68	28	114	70	32
5	Siberian	67	32	114	61	8
6	Tartar King	67	18	112	66	12
7	White Giant	67	10	115	76	26
8	Kendal White*	67	9	116	66	32
9	Irish Victor	66	21	114	84	8
10	Bavarian	65	27	116	50	33
11	Goldfinder	65	20	115	64	32
12	Improved American	65	1	115	68	12
13	American Beauty	63	22	115	81	26
14	Sensation	63	16	114	62	26
15	Black Beauty	63	..	112	56	26
16	Improved Ligowo	62	10	114	53	30
17	Lincoln	62	..	115	54	22
18	Joanette	61	29	112	66	..
19	Thousand Dollar	61	28	116	71	4
20	Swedish Select	61	21	113	71	26
21	Kendal Black*	61	9	115	68	16
22	Banner	60	26	114	60	30
23	Columbus	60	24	115	65	14
24	Golden Giant	60	17	118	78	4
25	American Triumph	59	14	113	57	24
26	Pioneer	59	14	113	57	4
27	Wide Awake	59	8	116	68	10
28	Twentieth Century	55	19	113	59	28
29	Golden Beauty	52	3	115	59	18
	(For less than 5 years.)					
	Storm King (4 years)	55	29	109	54	2
	Virginia White (2 yrs)	65	4	108	58	16

The average crop in 1907 of the thirty-one varieties of oats tested on the Experimental Farm at Agassiz was 66 bushels, 16 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley were grown at Agassiz in 1907. These plots were all sown on April 18th, the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Mensury	58	4	102	45	10
2	Empire*	55	4	104	55	..
3	Albert*	52	28	104	50	40
4	Argyle*	52	4	104	40	..
5	Claude*	50	36	102	42	44
6	Odessa	50	30	101	42	4
7	Stella*	50	28	108	39	8
8	Mansfield*	50	14	105	50	10
9	Yale*	49	20	106	54	40
10	Nugent*	49	10	106	38	16
11	Champion	47	32	99	41	32
12	Trooper*	47	24	108	48	26
13	Oderbruch	47	24	108	43	26
14	Summit*	45	12	108	42	24
	(For less than 5 years.)					
	Blue Long Head (3 yrs)	44	8	104	40	..

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Agassiz, B.C., was 44 bushels 47 lbs per acre.

Experimental Farm, Agassiz, B. C.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Standwell	53	24	111	57	24	10	Gordon*	47	12	108	47	34
2	Sidney*	52	24	111	52	24	11	Jarvis*	44	30	110	40	48
3	Dunham*	52	2	109	56	12	12	Logan*	44	16	109	39	28
4	Canadian Thorpe	51	38	109	48	36		(For less than 5 years.)					
5	Beaver*	51	18	110	42	34							
6	French Chevalier	50	28	111	41	32		Swedish Chevalier (3 years)	45	37	108	42	24
7	Danish Chevalier	50	24	111	53	16							
8	Invincible	49	26	110	48	16							
9	Clifford*	47	24	106	42	44							

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Agassiz, B.C., was 47 bushels 13 lbs. per acre.

PEAS.

Twenty varieties of peas were grown at Agassiz in 1907. These plots were sown on April 18th the quantity of seed sown varying from two to three bushels per acre depending on the size of the pea, of the smaller sized peas two bushels are usually sufficient while the larger sorts require three bushels.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.		Number.	Varieties tested.	Average Yield.		Average days maturing.	Yield in 1907.	
	(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.		(For five years.)	Bu.	Lbs.	Days.	Bu.	Lbs.
1	Early Britain	45	6	110	47	10	11	Prince*	38	22	118	43	10
2	White Marrowfat	43	44	117	42	10	12	Gregory*	37	38	114	43	..
3	English Grey	42	4	114	41	20	13	Archer*	37	16	116	47	20
4	Chancellor	41	12	116	52	..	14	Prince Albert	37	16	116	40	40
5	Arthur*	39	58	116	46	50	15	Black eye Marrowfat	36	50	117	46	20
6	Golden Vine	39	38	115	48	..	16	Picton*	36	36	118	42	..
7	Wisconsin Blue	38	56	114	46	40	17	Daniel O'Rourke	36	14	110	34	..
8	Victoria*	38	52	118	36	..	18	Paragon*	36	..	119	44	..
	Mackay*	38	40	116	40	..	19	Agnes*	35	40	118	43	20
	Nelson	38	36	116	50	.	20	Prussian Blue	33	26	113	36	20

The average crop in 1907 of the twenty varieties of peas on the Experimental Farm at Agassiz, B.C., was 43 bushels 33 lbs. per acre.

INDIAN CORN.

Eighteen varieties of Indian corn were tested at Agassiz in 1907. Two varieties tested at the other Experimental Farms, Early Leaming and Early Longfellow did not reach Agassiz in time for sowing. The seed was sown in rows about three feet apart, and the plants thinned out to 6 to 8 inches in the rows.

Experimental Farm, Agassiz, B. C.

The seed was sown on May 25th, and the crop was cut green for ensilage on October 12th. This crop needs frequent cultivation throughout the summer to produce the best results.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	lbs.	Tons.	lbs.		(For five years.)	Tons.	lbs.	Tons.	lbs.
1	Pride of the North	21	1,492	16	780	10	White Cap Yellow Dent	16	1,764	15	580
2	Giant Prolific Ensilage	19	1,160	17	100	11	Angel of Midnight	16	1,110	14	600
3	Superior Fodder	19	919	14	820	12	Eureka	16	952	22	200
4	Red Cob Ensilage	19	698	11	330	13	Early Mastodon	16	470	15	1,020
5	Compton's Early	19	529	17	1,200	14	King Philip	15	1,020	16	1,090
6	Mammoth Cuban	18	564	11	1,210	15	North Dakota White	15	756	11	440
7	Salzer's All Gold	17	1,842	11	1,320	16	Cloud's Early Yellow	14	1,994	18	1,620
8	Champion White Pearl	17	628	17	320	17	Longfellow	14	1,502	18	1,280
9	Early Butler	16	1,880	11	1,760	18	Selected Leaming	13	928	14	1,480

The average crop in 1907 of the eighteen varieties of Indian corn tested on the Experimental Farm at Agassiz, was 15 tons 114 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips were tested at Agassiz in 1907. The seed was sown in drills two and a half feet apart and the young plants were thinned out to about 10 to 12 inches apart in the rows. The seed was sown on May 17th, and the roots were pulled on November 7th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Perfection Swede	24	461	14	776	7	Jumbo	24	193	18	1,752
2	Halewood's Bronze Top	25	1,809	13	1,984	8	Hall's Westbury	23	596	15	1,680
3	Carter's Elephant	25	1,579	15	1,614	9	Magnum Bonum	23	398	15	360
4	Bangholm Selected	24	1,666	17	[illegible]	10	Kangaroo	23	253	15	1,416
5	Skirvings	24	708	14	[illegible]	11	Mammoth Clyde	23	946	17	1,772
6	Good Luck	24	[illegible]	13	[illegible]	12	Hartley's Bronze	21	1,247	16	76

The average yield in 1907 of the twelve varieties of turnips tested on the Experimental Farm at Agassiz, B. C., was 15 tons 1,526 lbs. per acre.

Experimental Farm, Agassiz, B. C.

MANGELS.

Ten varieties of mangels were tested at Agassiz in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to 10 to 12 inches apart in the rows. The seed was sown May 1st, and the roots were pulled November 7th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For less than five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Half Sugar White.....	23	1,791	25	160		Perfection Mammoth Long Red (1 year)	23	520	23	520
2	Yellow Intermediate.....	22	1,515	13	400		Crimson Champion (1 year).	14	512	14	512
3	Giant Yellow Globe.	22	1,115	15	1,284		Mammoth Red Intermediate (1 year).....	12	1,212	12	1,212
4	Selected Yellow Globe.....	22	524	18	960						
5	Giant Yellow Intermediate.	21	1,225	22	1,352						
6	Prize Mamm. Long Red...	19	1,809	18	1,356						
7	Gate Post.....	19	1,593	19	1,336						

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Agassiz, B. C., was 18 tons 709 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Agassiz in 1907. The seed was sown in drills two feet apart, and the young plants were thinned out to about four or five inches apart in the rows. The seed was sown on May 1st, and the roots were pulled on November 7th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Giant White Vosges .. .	29	681	36	1,524	4	Mam. White Intermediate.	24	1,894	23	596
2	Ontario Champion	25	1,209	39	1,936	5	White Belgian..... . ..	23	1,738	31	832
3	Improved Short White....	25	396	30	1,614	6	Half Long Chantenay	19	727	24	1,500

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Agassiz, B. C., was 31 tons 339 lbs. per acre.

Experimental Farm, Agassiz, B. C.

SUGAR BEETS.

Three varieties of sugar beets were tested at Agassiz in 1907. The seed was sown in drills two feet apart, and the young plants thinned out to about four or five inches apart in the rows. The seed was sown on May 1st, and the roots were pulled on November 7th

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield. in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Wanzleben	17	1,558	12	585	3	French Very Rich	16	1 013	11	935
2	Vilmorin's Improved	17	1,241	16	310						

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Agassiz, B.C., was 13 tons, 620 lbs. per acre.

POTATOES.

Twenty-eight kinds of potatoes were grown at Agassiz in 1907. For planting the potatoes were cut into pieces with two or three eyes in each, and these pieces were planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows. The potatoes were planted on May 14th, and were dug on September 24th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Late Puritan	511	17	552	12	17	Burnaby Mammoth	355	1	475	12
2	Dreer's Standard	481	48	510	24	18	Maule's Thoroughbred	351	7	316	48
3	Uncle Sam	469	55	558	48	19	Irish Cobbler	345	50	396	..
4	American Wonder	467	47	444	24	20	Vick's Extra Early	342	19	378	24
5	Rochester Rose	453	50	523	36	21	Canadian Beauty	290	24	389	24
6	Empire State	439	47	545	36	22	Money Maker	282	55	316	48
7	Country Gentleman	439	20	523	36	23	Early Envoy	263	47	435	36
8	Sabean's Elephant	431	16	554	24						
9	State of Maine	429	26	492	48		(For less than 5 years.)				
10	Carman No. 1	420	16	479	36						
11	Holborn Abundance	414	29	563	12		Vermont Gold Coin (3 years)	544	8	554	24
12	Reeve's Rose	403	42	453	12		Morgan Seedling (3 years)	475	48	598	24
13	Early Rose	391	56	598	24		Dooley (3 years)	456	8	444	24
14	Early White Prize	361	41	541	12		Ashleaf Kidney (2 years)	463	6	431	12
15	Everett	360	58	457	36		Dalmeny Beauty (2 years)	305	48	334	24
16	Bovee	357	43	413	36						

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Agassiz, B.C., was 474 bus., 25 lbs. per acre.

EXPERIMENTAL FARM, LACOMBE, ALBERTA.

The site for an Experimental Farm for Northern Alberta at Lacombe, was chosen last year, but possession of the land was not obtained early enough in the season to permit of a complete series of trial plots being provided for, such as are sown from year to year at the older established experimental farms. No time however was lost in securing and forwarding such material as could be procured so as to make the series of plots as complete as was practicable. This being the first year that these trial plots have been sown at Lacombe, the results of 1907 only can be given.

The season was unfavourable, the spring cold and backward and the summer short. Frost occurred on the nights of August 10th and 21st, which injured the corn so that it shrivelled up and was ploughed under. The plots of peas also were badly injured so that their yields could not be determined. All varieties of wheat were more or less frosted and the later sorts were deficient in weight and low in vitality. Nevertheless the fourteen varieties under trial gave an average yield of 21 bush. 51 lbs. per acre.

Oats gave a good crop, the average yield of the thirty-one sorts tested was 86 bush. 31lbs. per acre and eight of these were above the standard in weight.

The 15 varieties of six-rowed barley averaged 57 bush. 26 lbs. per acre and the 13 varieties of two rowed barley averaged 39 bush. 39 lbs. per acre. The field roots also did well. Fifteen varieties of turnips averaged 18 tons 642 lbs. per acre. Ten sorts of mangels 25 tons 799 lbs., six of carrots, 16 tons 1,479 lbs. and three of sugar beets 16 tons 1,264 lbs. per acre. Only 14 varieties of potatoes were tried and these were planted unusually late. They also suffered somewhat from frost, but their average yield was 152 bush. 58 lbs. per acre. In such an unusual season when some varieties failed to ripen completely it was impossible to determine accurately in every case the number of days from sowing to ripening hence this item of information is here omitted.

The plots of grain were one sixtieth of an acre each. The yield per acre of the field roots has been calculated from the crop obtained from two rows each 66 feet long.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) have been grown at the Lacombe Experimental Farm in 1907. The wheat was sown on May 1st, the seed being used at the rate of about one and one-half bushels per acre.

Number.	Varieties tested.	Yield in 1907.		Weight per bushel.	Percentage of germination.	Number.	Varieties tested.	Yield in 1907.		Weight per bushel.	Percentage of germination.
	(For one year.)	Bu.	Lbs.	Lbs.			(For one year.)	Bu.	Lbs.	Lbs.	
1	Percy*	34	..	52	67	8	Hungarian White	20	..	47	42
2	Bishop*	33	..	51	76	9	Pringle's Champlain	18	..	46	51
3	Stanley*	31	..	47	50	10	Huron*	17	30	47	87
4	Preston*	29	..	49	65	11	Herisson Bearded	17	..	48½	47
5	Colorado	25	..	49	60	12	Red Fern	15	..	42	15
6	Downy Riga*	23	30	55½	71	13	White Fife	13	..	37½	9
7	White Russian	21	..	42	34	14	Red Fife	9	..	38½	9

The average crop in 1907 of the fourteen varieties of wheat on the Experimental Farm at Lacombe, Alta., was 21 bushels 51 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

DURUM OR MACARONI WHEAT.

While the durum wheats average usually heavier crops in the Canadian Northwest than they do in Eastern Canada, they are very unpopular with millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts, and should only grow such quantities as they require for feed, or to meet special demands.

Four varieties of durum wheat were grown on the Experimental Farm at Lacombe. The seed was sown on May 1st at the rate of about 105 lbs. per acre.

Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.	Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.
	(For one year.)	Bu. Lbs.	Lbs.			(For one year.)	Bu. Lbs.	Lbs.	
1	Yellow Gharnovka ...	24 ..	44½	3	3	Roumanian	29 ..	45½	31
2	Goose	23 ..	45	51	4	Mahmoudi.	20 ..	40	24

The average crop in 1907 of the four varieties of durum wheat on the Experimental Farm at Lacombe, Alta., was 21 bushels 45 lbs. per acre.

EMMER AND SPELT.

Two varieties of emmer and two of spelt were tested at Lacombe. The seed was sown on May 1st, at the rate of about 120 lbs. per acre. Common emmer is the grain sometimes referred to under the incorrect name of "Speltz."

Number.	Varieties tested.	Yield in 1907.	Number.	Varieties tested.	Yield in 1907.
	(For one year.)	Lbs.		(For one year.)	Lbs.
1	Common Emmer.....	1,200	3	White Spelt.....	840
2	Red Spelt...	1,020	4	Red Emmer	540

The average crop in 1907 of the four varieties of Emmer and Spelt on the Experimental Farm at Lacombe, Alta, was 900 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

OATS.

Thirty-one varieties of oats were tested at Lacombe. The seed was sown on May 3rd and 4th at the rate of about two bushels per acre.

Number.	Varieties tested.	Yield in 1907.		Weight per bushel.	Percentage of germination.	Number.	Varieties tested.	Yield in 1907.		Weight per bushel.	Percentage of germination.
	(For one year.)	Bu.	Lbs.	Lbs.			(For one year.)	Bu.	Lbs.	Lbs.	
1	Pioneer	110	10	35	50	17	Twentieth Century	85	20	29	46
2	Golden Beauty	109	14	33½	31	18	Wide Awake	84	24	33½	50
3	Danish Island	107	22	30	53	19	American Beauty	83	28	32	54
4	Storm King	98	28	35	23	20	Improved Ligowo	83	28	32	64
5	White Giant	95	10	32½	58	21	Abundance	83	28	33	62
6	Tartar King	92	22	34	42	22	Thousand Dollar	82	32	33	52
7	Banner	92	22	35	40	23	Goldfinder	81	6	31	37
8	Swedish Select	92	22	34½	49	24	Milford White*	81	6	33	38
9	Sensation	92	22	35½	57	25	Ker[illegible] Black*	81	6	37½	80
10	Irish Victor	91	26	35	58	26	Gol[illegible] Fleece	77	22	32	41
11	Black Beauty	90	..	32½	53	27	Lincoln	75	30	32	44
12	American Triumph	89	4	30½	43	28	Kendal White*	73	8	32	57
13	Bavarian	88	8	33	43	29	Columbus	70	20	31	47
14	Improved American	88	8	31½	45	30	Golden Giant	60	..	27½	16
15	Siberian	87	12	29	41	31	Joanette	49	14	30	66
16	Virginia White	87	12	37	67						

The average crop in 1907 of the thirty-one varieties of oats on the Experimental Farm . . Lacombe, Alta., was 86 bus., 31 lbs. per acre.

BARLEY.

Fifteen sorts of six rowed barley and thirteen sorts of two rowed barley were tested at Lacombe. These plots were all sown on May 10th, the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Yield in 1907.		Weight per bushel.	Percentage of germination.	Number.	Varieties tested	Yield in 1907.		Weight per bushel.	Per. centage of germination.
	(For one year.)	Bu.	Lbs.	Lbs.			(For one year.)	Bu.	Lbs.	Lbs.	
1	Nugent*	72	24	44½	92	9	Blue Long Head	53	36	42	75
2	Mensury	72	24	44	96	10	Empire*	51	12	44	92
3	Oderbruch	70	..	43½	89	11	Albert*	48	36	46	83
4	Mansfield*	68	36	46½	76	12	Champion	48	36	38	74
5	Stella*	65	..	43	93	13	Yale*	47	24	45	71
6	Claude*	60	.	42	95	14	Argyle*	47	24	47	80
7	Summit*	57	24	44	91	15	Trooper*	42	24	41½	96
8	Odessa	56	42	40½	69						

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Lacombe, Alta., was 57 bus., 26 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Yield in 1907.		Weight per bushel.	Percentage of germination.	Number.	Varieties tested.	Yield in 1907.		Weight per bushel.	Percentage of germination.
	(For one year.)	Bu.	Lbs.	Lbs.			(For one year.)	Bu.	Lbs.	Lbs.	
1	Clifford*	50	..	49¼	95	8	Sidney*	38	16	46	85
2	French Chevalier	46	12	44½	77	9	Invincible	37	24	42½	72
3	Gordon*	45	..	47½	91	10	Beaver*	36	42	46	88
4	Canadian Thorpe	45	..	41	58	11	Danish Chevalier	32	24	42	82
5	Dunham*	43	36	48	89	12	Jarvis*	31	12	46	90
6	Logan*	42	24	44½	92	13	Swedish Chevalier	28	36	36½	71
7	Standwell	40	..	40½	70						

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Lacombe, Alta., was 39 bus., 39 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips were tested at Lacombe in 1907. The seed was sown in drills two feet apart, and the young plants were thinned out to about 10 to 12 inches apart in the rows. The seed was sown on June 10th and the roots were pulled on October 23rd.

Number.	Varieties tested.	Yield in 1907.		Number.	Varieties tested.	Yield in 1907.	
	(For one year only.)	Tons.	Lbs.		(For one year only.)	Tons.	Lbs.
1	Hartley's Bronze Top	26	800	7	Jumbo	19	16
2	Good Luck	22	1,408	8	Halewood's Bronze Top	17	848
3	Kangaroo	22	1,408	9	Perfection Swede	14	1,024
4	Skirvings	22	352	10	Bangholm Selected	11	232
5	Mammoth Clyde	22	352	11	Magnum Bonum	11	16
6	Hall's Westbury	20	1,184	12	Carter's Elephant	10	64

The average crop in 1907 of the fifteen varieties of turnips on the Experimental Farm at Lacombe, Alta., was 18 tons 642 lbs. per acre.

MANGELS.

Ten varieties of mangels were tested at Lacombe in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to 10 to 12 inches apart in the rows. The seed was sown on May 29th, and the roots were pulled on October 21st.

Number.	Varieties tested.	Yield in 1907.		Number.	Varieties tested.	Yield in 1907.	
	(For one year.)	Tons.	Lbs.		(For one year.)	Tons.	Lbs.
1	Giant Yellow Intermediate	32	1,528	6	Mammoth Red Intermediate	22	1,936
2	Giant Yellow Globe	28	1,552	7	Selected Yellow Globe	22	1,408
3	Half Sugar White	28	1,552	8	Prize Mammoth Long Red	20	1,184
4	Yellow Intermediate	28	1,024	9	Crimson Champion	20	1,184
5	Gate Post	28	1,024	10	Perfection Mammoth Long Red	19	1,600

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Lacombe, Alta., was 25 tons 799 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

CARROTS.

Six varieties of field carrots were tested at Lacombe in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 29th, and the roots were pulled on October 22nd.

Number.	Varieties tested.	Yield in 1907.		Number.	Varieties tested.	Yield in 1907.	
	(For one year.)	Tons.	Lbs.		(For one year.)	Tons.	Lbs.
1	Improved Short White	26	744	4	Half Long Chantenay	14	1,568
2	Ontario Champion	16	680	5	White Belgian	14	982
3	Giant White Vosges	16	680	6	Mamm. White Intermediate	12	222

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Lacombe, Alta., was 16 tons 1,479 lbs. per acre.

SUGAR BEETS.

Three varieties of sugar beets were tested at Lacombe in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 29th, and the roots were dug on October 21st

Number.	Varieties tested.	Yield in 1907.		Number.	Varieties tested.	Yield in 1907.	
	(For one year.)	Tons.	Lbs.		(For one year.)	Tons.	Lbs.
1	Wanzleben	18	960	3	Vilmorin's Improved	15	1,152
2	French Very Rich	15	1,680				

The average crop in 1907 of the three varieties of sugar beets on the Experimental Farm at Lacombe Alta. was 16 tons 1,264 lbs. per acre.

POTATOES.

Fourteen varieties only of potatoes were grown at Lacombe in 1907. For planting, the potatoes were cut into pieces with two or three eyes in each and these pieces were

planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows. The potatoes were planted on June 15th and were dug on October 10th.

Number.	Varieties tested.	Yield in 1907.		Number.	Varieties tested.	Yield in 1907.	
	(For one year.)	Bus.	Lbs.		(For one year.)	Bus.	Lbs.
1	Early Envoy	220	34	8	Early Rose	149	46
2	Country Gentleman	215	7	9	Holborn Abundance	139	15
3	Everett	197	11	10	Canadian Beauty	117	55
4	Lovee	178	45	11	Burnaby Mammoth	116	4
5	State of Maine	178	37	12	American Wonder	113	19
6	Vermont Gold Coin	178	37	13	Ashleaf Kidney	86	36
7	Dreer's Standard	175	24	14	Dalmeny Beauty	74	16

The average crop in 1907 of the fourteen varieties of potatoes on the Experimental Farm at Lacombe, Alta., was 152 bushels, 58 lbs. per acre.

SUMMARY.

The results obtained from the uniform trial plots as given in this bulletin show that there are marked differences in the relative productiveness of varieties even when grown side by side under similar conditions. The results of the average crops obtained for five years indicate also that the tendency to productiveness is in many instances persistent, manifesting itself under varying conditions of soil and climate to a remarkable degree. The establishment of such facts point to the importance of farmers choosing for seed those varieties which give the heaviest crops, so that farming in Canada may thus be made more profitable.

During the past year the number of varieties under test has been further reduced by dropping some of those which have failed to come up to the high standard required. This reduction in the number tested will serve to give greater prominence to those varieties of the highest excellence.